



THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT	DOCKET NO. 85940/18 (158 US 3)	SERIAL NO. 10/035,476	APR 17 2002 TECH CENTER 1600/2900
	APPLICANTS Heikkila et al.		
	FILING DATE October 25, 2001	GROUP 1651	

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U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>an</i>	3,619,369	11/9/71	Onishi et al.	195	37	7/8/69
<i>an</i>	4,096,036	6/20/78	Liu et al.	195	31 F	4/7/77

OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
<i>an</i>	Publication: "Biotechnological Production of Xylitol. Part 3: Operation In Culture Media Made From Lignocellulose Hydrolysates", by Juan Carlos Parajo, Herminia Domiquez & Jose Manuel Dominguez of Department of Chemical Engineering, University of Vigo, Ourense, Spain, published by <u>Bioresource Technology</u> 66 (1998), pages 25-40.
<i>an</i>	Publication: "Fermentation of Lignocellulosic Hydrolysates For Ethanol Production", by Lisbeth Olsson and Barbel Hanh Hagerdal of Applied Microbiology, University of Lund/Lund Institute of Technology, Lund Sweden, published by <u>Enzyme and Microbial Technology</u> 18: pages 312-331, (1996).
<i>an</i>	Publication: "Alternative Sweeteners Second edition, revised and Expanded", by Albert Bar, Bioresco Ltd., Brussels, Belgium, edited by Lyn O'Brien Nabors and Robert C. Gelardi of Calorie Control Council, Atlanta, Georgia, published by <u>Marcel Dekker, Inc.</u> pages 349-379 (1991).
<i>an</i>	Abstract: Japanese Application No. 59-183571 filed August 31, 1984, Publication No. 61-063291 (1063291), published April 1, 1986 of Dai Ichi Kogyo Seiyaku Co., Ltd. pertains to the Production of Xylitol Through Enzymatic Process.
<i>an</i>	Abstract: Japanese Application No. 60-244968 filed October 30, 1985, Publication No. 62-104588 (2104588), published May 15, 1987 of Nitto Electric Ind. Co., Ltd., pertains to Production of Xylitol.
<i>an</i>	Abstract: Japanese Application No. 59-1411 filed January 10, 1984, Publication No. 60-145095 (0145095), published July 31, 1995 of Jiyuujiyou Seishi KK, pertains to Preparation of Xylitol By Immobilized Microorganism.
<i>an</i>	Abstract: Japanese Publication No. 45-24834 (0024834), published August 18, 1970 of Zaidan Hojin Noda Sangyak (Zaid), pertains to Production Of Xylitol By Fermentation.

EXAMINER <i>an</i>	DATE CONSIDERED 11/15/05
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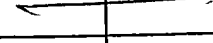

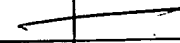

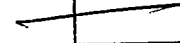


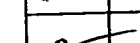


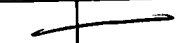

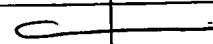
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EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
<i>an</i>	2,684,331	7-20-54	W.C. Bauman	210	24	1-11-52
<i>an</i>	2,911,362	11-3-59	R.M. Wheaton	210	31	11-24-52
<i>an</i>	2,985,589	5-23-61	D.B. Broughton et al.	210	34	5-22-57
<i>an</i>	3,586,537	6-22-71	Steiner et al.	127	37	7-16-69
<i>an</i>	3,784,408	1-8-74	Jaffe et al.	127	37	9-16-70
<i>an</i>	3,928,193	12-23-75	Melaja et al.	210	31	2-14-75
<i>an</i>	4,008,285	2-15-77	Melaja et al.	260	635	6-18-75
<i>an</i>	4,066,711	1-3-78	Melaja et al.	260	637	3-15-76
<i>an</i>	4,075,406	2-21-78	Melaja et al.	536	1	8-28-75
<i>an</i>	4,368,268	1-11-83	Gong	435	161	5-15-81
<i>an</i>	4,471,114	9-11-84	Sherman et al.	536	127	12-30-82
<i>an</i>	4,857,642	8-15-89	Kulprathipanja	536	127	12-31-86
<i>an</i>	4,940,548	7-10-90	Zinnen	210	656	4-17-89
<i>an</i>	4,990,259	2-5-91	Kearney et al.	210	659	8-26-89
<i>an</i>	5,081,026	1-14-92	Heikkila et al.	435	158	11-2-90
<i>an</i>	5,122,275	1-16-92	Rasche	210	659	8-5-89
<i>an</i>	5,127,957	7-7-92	Heikkila et al.	127	47	11-30-90
<i>an</i>	5,177,008	1-5-93	Kampen	435	139	6-18-90
<i>an</i>	5,198,120	3-30-93	Masuda et al.	210	659	12-18-90
<i>an</i>	5,225,580	7-6-93	Zinnen	554	30	8-16-90
<i>an</i>	5,951,777	8-14-99	Nurmi et al.	127	61	5-5-98







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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
<i>an</i>	Int. Application No.: PCT/US89/05572 Int. Pub. No.: WO 90/06796	Filing Date: 12-14-89 Pub. Date: 6-28-90	PCT			X	
<i>an</i>	Int. Application No.: PCT/FI90/00015 Int. Pub. No.: WO 90/08193	Filing Date: 1-15-90 Pub. Date: 7-26-90	PCT			X	
<i>an</i>	Int. Application No.: PCT/US90/07024 Int. Pub. No.: WO 91/08815	Filing Date: 11-30-90 Pub. Date: 6-27-91	PCT			X	
<i>an</i>	Application No. 87119111.0 Publication No. 0 279 946 A2	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	

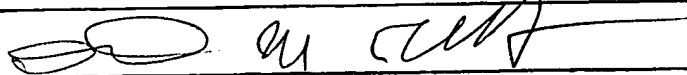
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		Application No. 87119111.0 Publication No. 0 279 946 A3	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	
		Application No. 87119111.0 Publication No. 0 279 946 B1	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 A2	Filing Date: 5-19-89 Pub. Date: 12-13-89	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 A3	Filing Date: 5-19-89 Pub. Date: 12-13-89	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 B1	Filing Date: 5-19-89 Pub. Date: 12-13-99	Europe			X	
		Application No. FR19890000209 Publication No. FR2641545	Filing Date: 1-10-89 Pub. Date: 7-13-90	French			X*	
		Application No. 62-235014 Publication No. 64-080409	Filing Date: 9-21-87 Pub. Date: 3-27-89	Japan			X*	

*ABSTRACT

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EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	CHEMICAL ABSTRACTS, Volume 105, No. 5, 4 August 1986, (Columbus, Ohio, US), J. C. DU PREEZ et al.: "Xylose fermentation by Candida shehatae and Pichia stipitis: effects of pH, temperature and substrate concentration"; see page 604, Abstract 41196y, & Enzyme Microb. Technol., 8 (6), 360-364 (1986).
	CHEMICAL ABSTRACTS, Volume 112, No. 5, 29 January 1990, (Columbus, Ohio, US), M.T. AMARAL-COLLACO et al.: "Utilization of the hemicellulosic fraction of agro-industrial residues by yeasts"; see page 449, Abstract 34371t, & Enzyme Syst. Lignocellul. Degrad., 221-230 (1989).
	CHEMICAL ABSTRACTS, Volume 114, No. 5, 4, February 1991, (Columbus, Ohio, US), K.B. TAYLOR et al.: "The fermentation of xylose: studies by carbon-13 nuclear magnetic resonance spectroscopy", see page 592, Abstract 41014y, & J. Ind. Microbiol., 6 (1), 29-41 (1990).
	CHEMICAL ABSTRACT, Volume 98, No. 9, 28 February 1983, (Columbus, Ohio, US), GONG, CHENG SHUNG et al.: "Conversion of pentoses by yeasts"; see page 484, Abstract 70314c, & Biotechnol. Bioeng., 25 (1), 85-102 (1983).
	Publication: "Third European Congress On Biotechnology", by Weinheim presented in Muchen, Federal Republic of Germany, Volume II (September 10-14, 1984).
	Publication: "Chromatography of Oligosaccharides and Related Compounds on Ion-Exchange Resin" by Department of Engineering Chemistry, Chalmers University of Technology, Goteborg, Sweden, Advances in Chromatography, vol. 16, pages 113-149 (1978).

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		Publication: <i>"The Distribution of Polyalcohols Between Organic Ion Exchangers and Water"</i> by Malte Mattisson and Olof Samuelson, Department of Engineering Chemistry, Chalmers Tekniska Hogskola, Goteborg, Sweden, No. 7, pages 1386-1394 (1958).
		Publication: <i>"Ion-Exchange Chromatography of Aldehydes, Ketones, Ethers, Alcohols, Polyols and Saccharids"</i> published in Journal of Chromatography printed by Chromatographic Reviews, Elsevier Scientific Publishing Company, Amsterdam-Printed in The Netherlands, 98 pages 55-104 (1974).
		Publication: <i>"Xylitol dehydrogenase from Pachysolen tannophilus"</i> by G. Ditzelmuller, C.P. Kubicek, W. Wohrer and M. Rohr of Institute for Biochemische Technologie und Mikrobiologies, Wien, Austria, pages 195-198 (July 31, 1984).
		Abstract: French Application No. FR19890000209 filed January 10, 1989, Publication No. FR2641545 published July 13, 1990 of Agrocinq pertains to a Process For The Biosynthesis of Xylitol.
		Abstract: Japanese Application No. 62-235014 filed August 21, 1987, Publication No. 64-080409 published March 27, 1989 of Japan Organo Co., Ltd. pertains to a False Moving Bed Device.
		Publication: <i>"Fermentation of Cellulose and Hemicellulose Carbohydrates by Thermotolerant Yeasts"</i> by Linda D. McCracken and Cheng-Shung Gong of Laboratory of renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published by Biotechnology and Bioengineering Symp. No. 12, 91-102 (1982).
		Publication: <i>"Conversion of D-Xylose Into Xylitol By Xylose Reductase From Candida Pelliculose Coupled With the Oxidoreductase System of Methanogen Strain HU"</i> by V. Kitpreechavanich of Department of Microbiology, M. Hayasi, N. Nishio and S. Hagai of Department of Fermentation Technology, published Biotechnology Letter, Vol 6 No. 10, pages 651-656 (1984).
		Publication: <i>"Quantitative Production of Xylitol From D-Xylose By A High-Xylitol Producing Yeast Mutant Candida tropicalis HXP2"</i> by Cheng-Shung Gong, Li Fu.Chen and George T. Tsao of Laboratory of Renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published in Biotechnology Letters Vol. 3 No. 3, pages 130-135 (1981).

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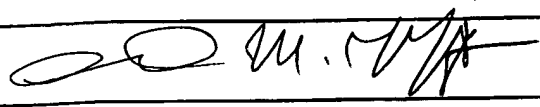
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
<i>ae</i>	WO-A1-88/05467	July 28, 1988	PCT				

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<i>a</i>	Dorfner, K., Ion Exchangers, Properties and Applications, Ann Arbor Science Publisher Inc., pp. 44-45.
<i>a</i>	Duolite C 464, Weak Acid Cation Exchange Resin, February 1981, 3 pages.
<i>on</i>	Zaborsky, O., Immobilized Enzymes, CRC Press, pp. 5-27.
<i>on</i>	Sax, N. and Lewis, Sr., R., Hawley's Condensed Chemical Dictionary, 11th ed., pp. 15 and 893.
<i>a</i>	Morrison, R. and Boyd, R., Organic Chemistry, 5th ed., pp. 833 and 839.
<i>a</i>	Allenza, P., Scherl, D., and Detroy, R., Hydrolysis of Xylan by an Immobilized Xylanase from <i>Aureobasidium pullulans</i> , Biotechnology and Bioengineering Symp. No. 17 (1986) pp. 425-433.
<i>on</i>	Jeng, C.Y., Wang, S.S. and Davidson, B., Ultrafiltration of Raw Sewage Using an Immobilized Enzyme Membrane, Enzyme Microb. Technol., April 1980, Vol. 2, pp. 145-147.
<i>on</i>	Dekker, Robert F.H., Bioconversion of Hemicellulose: Aspects of Hemi-cellulase Production by <i>Trichoderma reesei</i> QM 9414 and Enzyme Saccharification of Hemicellulose, Abstract 177464d, Chemical Abstracts, Vol. 98, 1983.
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<i>on</i>	Poutanen, K. and Puls, J., Enzymatic Hydrolysis of Steam-Pretreated Lignocellulosic Materials, Third European Congress on Biotechnology, Volume II, September, 1984, pp. 217-223.
<i>on</i>	International Preliminary Examination Report for PCT/FI91/00011 and Official Action for FI 900220.
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	Hyrkas et al., Heran Laktoosin Hydrolyysi Immobolisoidulla β -Galaktosidaasilla, 1974, pp. 38-47 and English language summary and translation of abstract.	
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	Amaral-Collaco, et al., Utilization of the Hemicellulosic Fraction of Agro Industrial Residues by Yeasts, Abstract 34371t, Fermentations Vol. 112, 1990.	
	Onishi et al., The Production of Xylitol, L-Arabinitol and Ribitol by Yeasts, Agr. Biol. Chem., Vol. 30, No. 11, 1996, pp. 1139 and 1144.	
	Weckstrom, L. and Leisola, M., Enzymatic Hydrolysis of Hemicellulose From Bisulfite Waste, Abstract 96:124760z, Wood Products, Vol. 96, 1982.	
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<i>[Signature]</i>	4,631,129	12/23/86	Heikkila	210	635	10/4/85
<i>[Signature]</i>	5,637,225	6/10/97	Heikkila et al.	210	659	5/9/94

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							YES	NO

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						YES	NO
<i>su</i>	FR A1 2641545	July 13, 1990	France				x*

* See International Search Report for PCT/FI 91/00011

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<i>su</i>	Chem. Abstracts, vol. 105, no. 5, 4 Aug. 1986; J.C. Du Preez et al.: "Xylose fermentation by Candida shehatae and Pichia stipitis: effects of pH, temperature and substrate concentration", page 604, abstract 44466y, & Enzyme Microb. Technol. 1986 8(6), 360-364
<i>su</i>	Chem. Abstracts, vol. 112, no. 5, 29 January 1990, M.T. Amaral-Collaco et al.: "Utilization of the hemicellulosic fraction of agro-industrial residues by yeasts", page 449, abstract 34371*, & Enzyme Syst. Lignocellul. Degrad. 1989, 0, 221-230
<i>su</i>	Chem. Abstracts, vol. 114, no. 5, 4 February 1991, K.B. Taylor et al.: "The fermentation of xylose: studies by carbon13 nuclear magnetic resonance spectroscopy", page 592, abstract 41044y, & J. Ind. Microbiol. 1990, 6 (1), 29-41
<i>su</i>	Chem. Abstracts, vol. 98, no. 8, 28 February 1983, Gong, Cheng Shung et al.: "Conversion of pentoses by yeasts", page 484, abstract 70344c, & Biotechnol. Bioeng. 1983, 25 (1), 85-102.
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